

JOINT MOBILE NETWORK OPERATIONS

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JMNO HISTORY

- Current command, control, communications, and computers (C4) networking systems were built to support hierarchical command structures
- Individual Services created different hierarchical C4 command structures
- Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF) identified the lack of interoperability between C4 networks as a problem
- Non-hierarchical mobile network operations (NetOps) procedures were needed to allow tactical warfighting units to quickly coordinate network access when crossing Service boundaries
- The Marine Corps, supported by the Army and Air Force, initiated a Joint Test and Evaluation (JT&E) to create joint tactics, techniques and procedures (TTP) for joint NetOps at the brigade and below level using currently fielded equipment
- July 2005: JMNO was chartered by the Office of the Secretary of Defense (OSD), Joint Program Office (JPO) as a 7-month Joint Feasibility Study (JFS) to determine whether a full-scale JT&E on JMNO could provide realistic, cost-effective solutions to the problems with joint NetOps
- September 2005: the JFS team convened the first JMNO Joint Warfighter Advisory Group (JWAG). They reviewed and refined the initial JMNO problem statement to reflect Joint Mobile NetOps requirements:

The lack of joint TTP limits the joint force's ability to access information resources and network services when crossing network boundaries

- Following the first JWAG, the JMNO problem statement was briefed to the JPO Technical Advisory Board (TAB)
- The TAB provided comments to begin shaping the JMNO test concept
- November 2005: the TAB comments were researched, addressed and included for a second JWAG
- The JMNO team completed the JFS by creating a Program Test Plan (PTP) and Consolidated Resource Estimate
- February 15, 2006: the JPO Senior Advisory Council (SAC) chartered JMNO for a 3-year JT&E aboard MCB Quantico, VA



OVERVIEW

The Joint Mobile Network Operations (JMNO) Joint Test and Evaluation (JT&E) will develop, test, and evaluate new joint tactics, techniques, and procedures (TTP). These TTP are designed to improve joint force (brigade and below) units' ability to communicate directly with each other across Service lines and to access information resources and network services when crossing Service network boundaries.



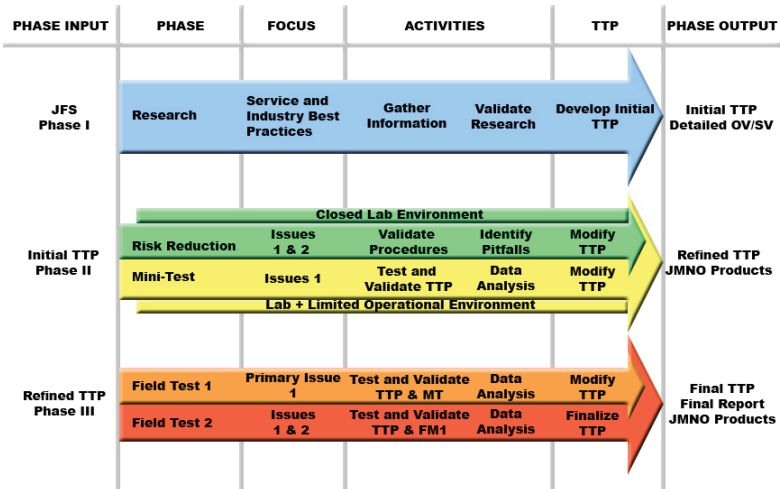
JMNO OBJECTIVES

- Improve mobile network access and maintain current performance by identifying and developing joint TTP
- Enhance user connectivity to the user's information resources while maneuvering through the battlespace
- Enable interoperability and Information Assurance (IA) between different Services' networks
- Provide input to future concepts employing mobile network operations on the asymmetric battlefield
- Maintain quality of service (QoS) across network boundaries



JMNO TEST ISSUES

The challenges related to joint mobile network operations (NetOps) are multi-faceted. The two JMNO test issues focus on joint TTP necessary to facilitate network-to-network and user cross-network support between diverse tactical-level, functional, and Service components. Therefore, JMNO has limited the scope of the JT&E to developing joint TTP that address NetOps at the tactical level, specifically, the users' access to information resources and network services when crossing network boundaries at the tactical level (brigade and below, or equivalent).



JMNO POTENTIAL BENEFITS TO THE WARFIGHTER

- Provides tactical user expanded network access during maneuver
- Increases maneuver flexibility when crossing Service boundaries
- Reduces network set-up time and complexity during maneuver
- Significantly reduces joint network negotiation time
- Maximizes tactical implementation regardless of hardware
- Enables greater joint situational awareness
- Improves synchronization of command at the tactical level
- Expedites information access and collaboration between Services

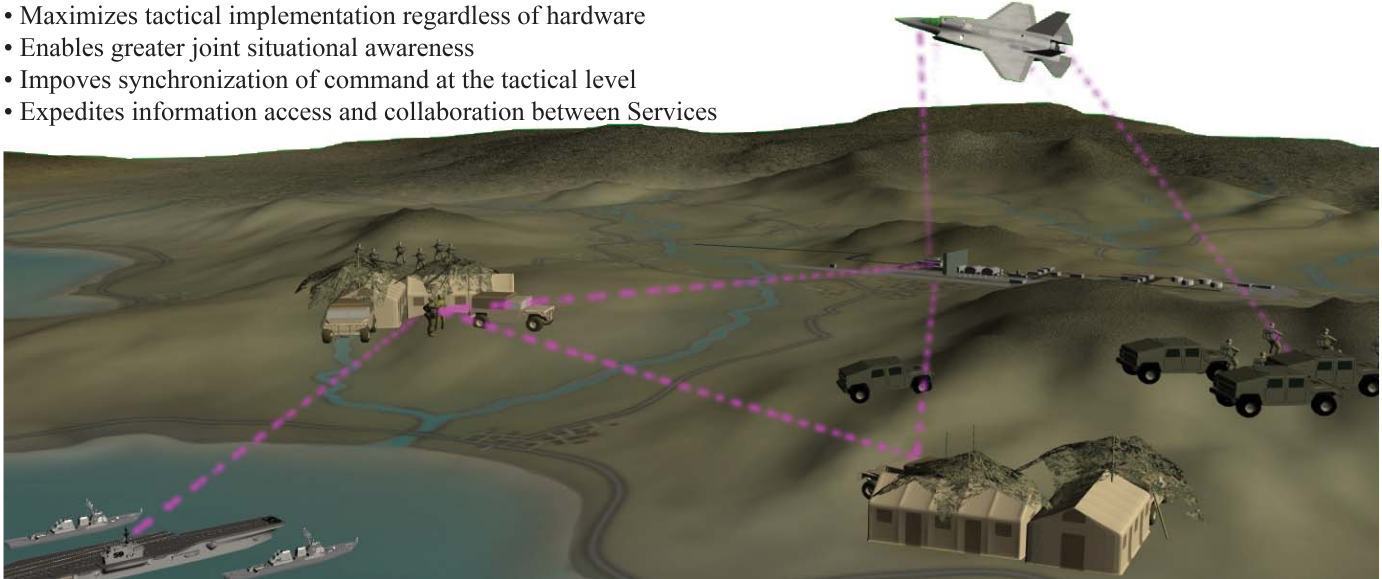
JMNO TIMELINE

The JMNO test approach includes three phases:

- 1) Research and develop initial joint TTP
 - Leverage existing studies and research
 - Involve SMEs during tabletop validation
- 2) Refine TTP during risk reduction exercises
 - DICE 07 (Feb-Apr 07)
 - JUICE 07 (Sep 07)
- 3) Validate joint TTP during field test exercises
 - TERMINAL FURY 07 (Dec 07)
 - ULCHI FOCUS LENS 08 (Aug 08)

Using multiple test events focused on both test issues will allow JMNO to use a test-fix-test approach to refine the developed joint TTP.

Services, COCOMS, and agencies will be identified to transition JT&E results and formalize all potential to doctrine, organization, training, materiel, leadership and education, personnel and facilities (DOTMLPF) discoveries.





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Frequently Asked Questions:

Q: What is a JT&E?

A: The OSD JT&E program provides the opportunity for a Service or a Combatant Commander (COCOM) to nominate joint problems for development of a non-materiel solution. OSD assigns selected nominations a charter and budget for three years to produce solutions to the joint problem. JT&E will conduct rigorous testing of both the problem and the non-materiel solutions to the problem. The non-materiel solutions are given to the Services and COCOMs in the form of tactics, techniques, and procedures (TTP).

Q: There are many groups working on network issues. What makes JMNO different?

A: Deployed Services experience trouble connecting their tactical Internet-Protocol (IP) routed communications networks. Each Service identified the lack of “joint network operations (NetOps) TTP” as an obstacle to network communications between the Service components within a Joint Task Force (JTF) which rely on teamwork for survival and mission success.

Q: Why did the Marine Corps nominate this issue as a JT&E?

A: Both OEF and OIF are operations where high-tempo maneuver are common. During high-tempo maneuver it is very important to share the location of friendly units with all the components within the JTF. Marine Corps units experienced great difficulty sharing friendly positions with other Services. The lack of joint network operations TTP was one of the main causes for this difficulty. The Marine Corps wants to work with the joint community to improve their ability to share tactical information among all components within a JTF.

Q: Since this is an important problem, how soon will JMNO provide the solution to the operating forces?

A: During the JMNO three-year test schedule, the JMNO team will be collaborating with the Services and operating forces. The JMNO TTP solutions will be made available to the operating forces in “real-time” as the solutions are tested.